Flowchart of the invention process

"Experimental" targets (1)   Probe set (2)

         Cells   Probes design
          ↓
Enrich for antigen binding cells
Enrich for specific cell population   Probes manufacture
          ↓
Extract DNA or RNA   ↓
          ↓
Label specific for target encoding   Probes immobilized as an array

> Hybridizing (3)
>   ↓
> Washing (3)
>   ↓
> Determining labeled
>   probe level (3)
>   ↓
> Compilation (4)
>   ↓
> Conclusions (5)
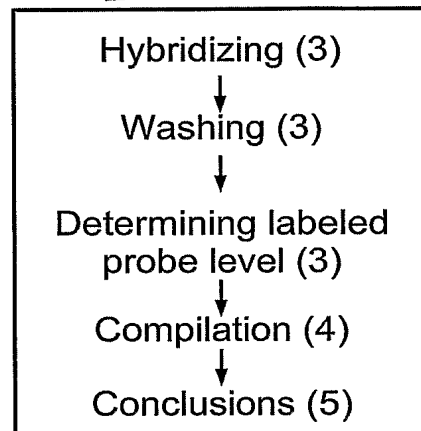
Fig. 1

Illustration of the variable region gene and an example of overlapping
positively labeled probes

1   330 bases

FR1   CDR1 FR2 CDR2 FR3   CDR3   FR4
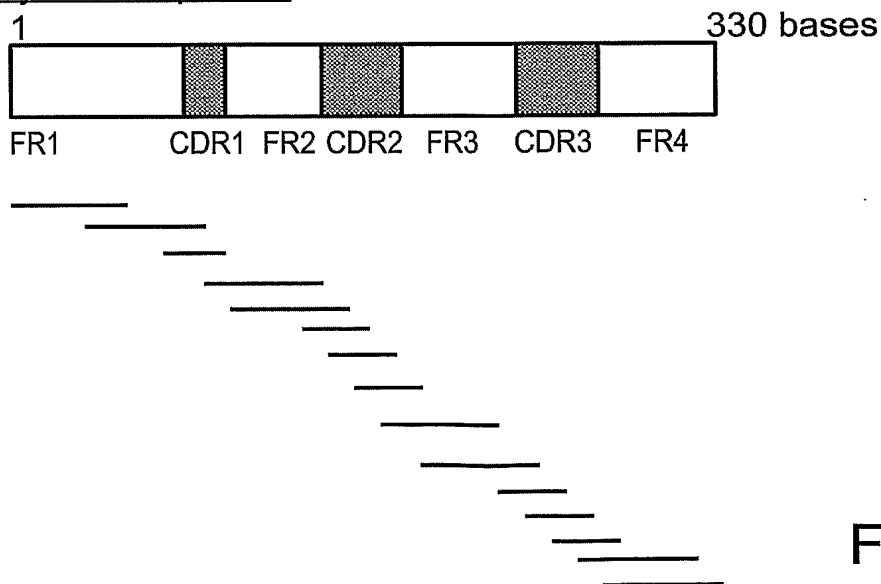
Fig. 2

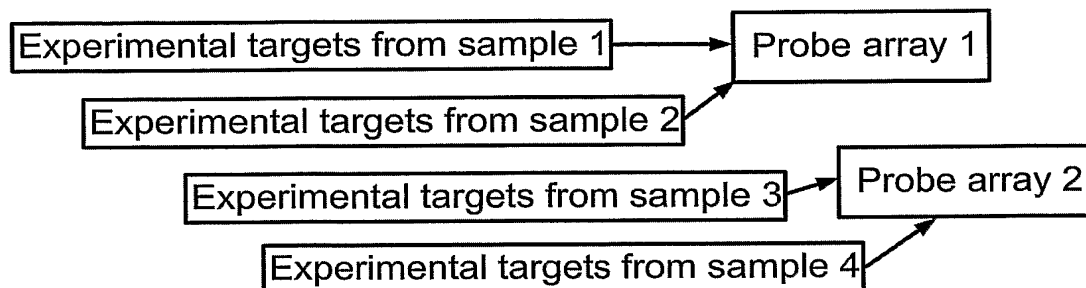Examples of multiple sample experiment. The probe arrays represented have the same content.
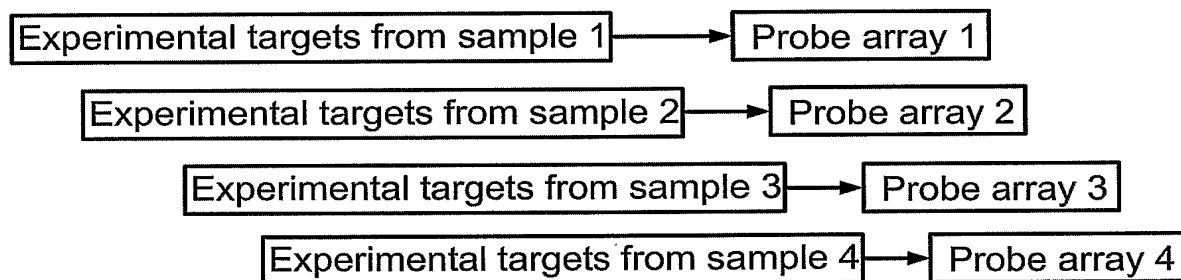

Fig. 3a

Fig. 3b

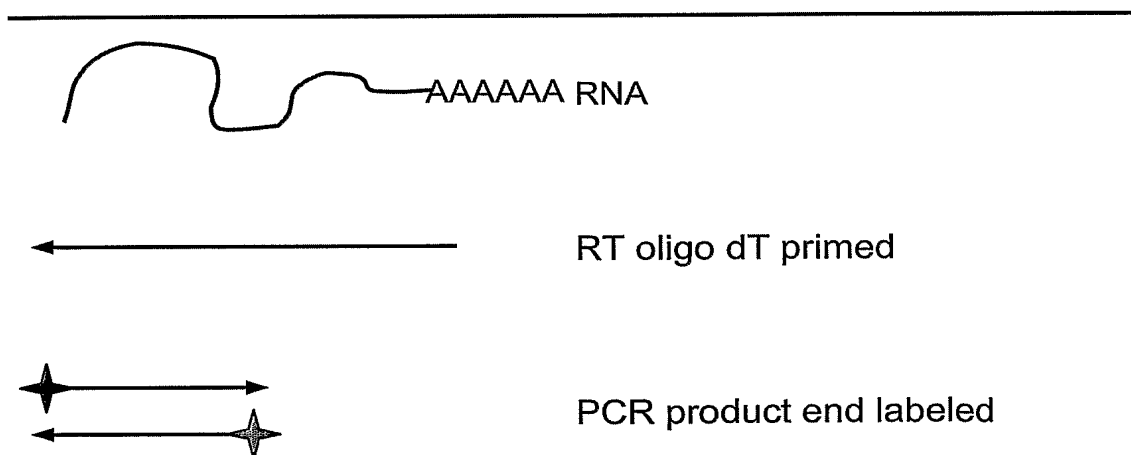Scheme illustrating end labeled plus and minus strand

Fig. 4

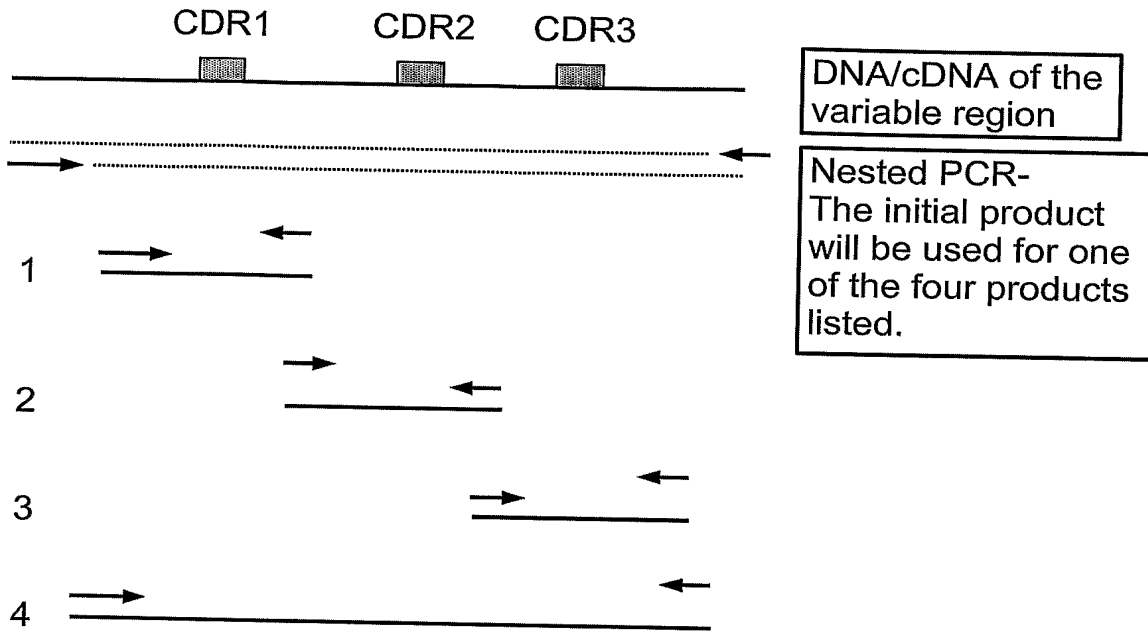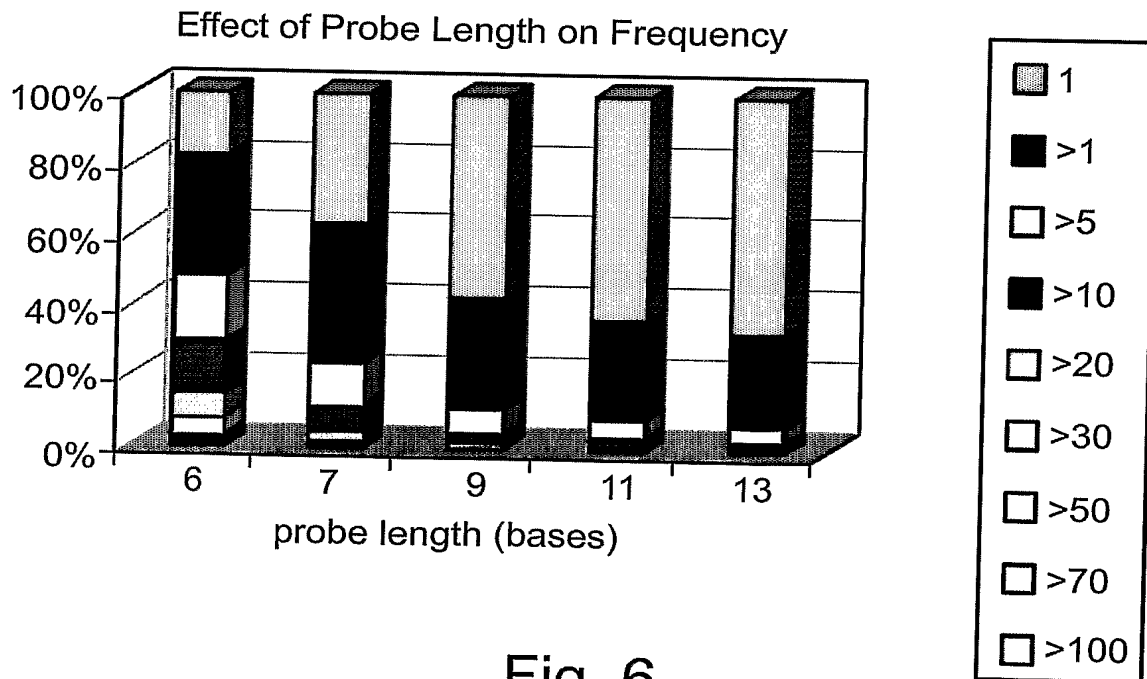## Scheme illustrating PCR amplification of specific regions within the target sequence.

Fig. 5

Fig. 6

TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG
TGTGCGAGAGANNNNNNGGTACAACTGG

Fig. 7

CAGGTGCAGCTGGTGCAGTCTGGGGGAGGCCTAGTCCAGCCGGGGGGGTCCCTGAGACTCTCCTGTGCGCCTTTGGATTCAACTTCAGTTCCTA
TGTTATGCACTGGGTCCGCCAGGCTCCAGGGAAGGGACTGGAATATCTTTCAGCGATTAGTAGTAGTGATGGAGAGACAACATATCATGCAAACTCTG
TGAAGGGCAGATTCACCAGCTCCAGAGACAATTCCAAGAACACACACTGTTTCTTCAAATGGGCAGCCTGAGAACTGAGGACGTGGCTGTCTACTAC
TGTGCGAGAGATCGTTACTATGAGACTAGTGGTTCCAATGCTTTGATGTCTGGGGCCAAGGGACCAATGGTCGTCGTCTCTTC

Fig. 8

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VH3-64          GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTCCAGCCTGGGGGGTCCCTGAGACTC   60
GI|23320665|GB  CAGGTGCAGCTGGTGGCAGTCTGCAGTCTCCAGTCCAGCCTGGGAGGTCCCTGAGACTC    60

VH3-64          TCCTGTGCAGCCTCTGGATTCACCTTCAGTAGCTATGCGATGCACTGGGTCCGCCAGGCT   120
GI|23320665|GB  TCCTGTGCCGCCTTTGGATTCAACTTCAGTTCCTATGTTATGCACTGGGTCCGCCAGGCT   120

VH3-64          CCAGGGAAGGGACTGGAATATGTTTCAGCTATTAGTAGTAATGGGGTAGCACATATTAT    180
GI|23320665|GB  CCAGGGAAGGGACTGGAATATCTTTGGAATATTAGTGATTAGTAGTAGTGAGACAACATATCAT   180

VH3-64          GCAGACTCTGTGAAGGGCAGATTCACCATCTCCAGAGACAATTCCAAGAACACGCTGTAT   240
GI|23320665|GB  GCAAACTCTGTGAAGGGCAGATTCACCAGCTCCAGAGACAATTCCAAGAACACACTGTTT   240

D3-22                                                                  GT   2
VH3-64          CTTCAAATGGGCAGCCTGAGAGCTGAGGACATGGCTGTGTATTACTGTGCGAGAGA      296
GI|23320665|GB  CTTCAAATGGGCAGCCTGAGAACTGAGGACGTGGCTGTGTCTACTACTGTGCGAGAGATCG-  299

D3-22           ATTACTACTATGATAGTAGTGGTTATTACTAC                                31
JH3                                          GATGCTTTTGATGTCTGGGGGCCAAGGGACA   30
GI|23320665|GB  -TTACTATGAGACTAGTGGTT------CCAATGCTTTTGATGTCTGGGGGCCAAGGAACA    351

JH3             ATGGTCACCGTCTCTTCAG                                             49
GI|23320665|GB  ATGGTCGTCGTCTCTTCA                                              369
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Fig. 9